

Problem statement-7 Hibernate

```
package com;  
public class Color {  
    private long COLORID;  
    private String name;  
  
    public Color() {  
  
    }  
    public Color(String name) {  
        this.COLORID = 0;  
        this.name = name;  
    }  
  
    public long getCOLORID() {return this.COLORID; }  
    public String getName() { return this.name;}  
    public void setCOLORID(long id) { this.COLORID = id;}  
    public void setName(String name) { this.name = name;}  
  
}
```

package com;

import java.math.BigDecimal;
import java.util.Collection;
import java.util.Date;
import java.util.List;
import java.util.Set;
import java.util.Map;

```
public class EProduct {  
    private long ID;  
    private String name;  
    private BigDecimal price;  
    private Date dateAdded;  
    private List<Color> colors;  
    private Collection<ScreenSizes> screenSizes;  
    private Set<OS> os;  
    private Map finance;
```

```

____ public EProduct() {
____
____ }

____ public long getID() {return this.ID; }
____ public String getName() { return this.name;}
____ public BigDecimal getPrice() { return this.price;}
____ public Date getDateAdded() { return this.dateAdded;}
____ public List<Color> getColors() { return this.colors;}
____ public Collection<ScreenSizes> getScreensizes() { return
this.screenSizes;}
____ public Set<OS> getOs() { return this.os;}
____ public Map getFinance() { return this.finance;}

____ public void setID(long id) { this.ID = id;}
____ public void setName(String name) { this.name = name;}
____ public void setPrice(BigDecimal price) { this.price = price;}
____ public void setDateAdded(Date date) { this.dateAdded = date;}
____ public void setColors(List<Color> colors) { this.colors = colors;}
____ public void setScreensizes(Collection<ScreenSizes> sizes) {
this.screenSizes = sizes;}
____ public void setOs(Set<OS> os) { this.os = os;}
____ public void setFinance(Map finance) { this.finance = finance;}
____ }

```

```

package com;
public class Finance {
____ private long FINANCEID;
____ private String name;
____ private String ftype;

____ public Finance() {
____
____ }
____ public Finance(String name, String ftype) {
____     this.FINANCEID = 0;
____     this.name = name;
____     this.ftype = ftype;
____ }

```

```

    public long getFINANCEID() {return this.FINANCEID; }
    public String getName() { return this.name;}
    public String getFtype() { return this.ftype;}
    public void setFINANCEID(long id) { this.FINANCEID = id;}
    public void setName(String name) { this.name = name;}
    public void setFtype(String ftype) { this.ftype= ftype;}

}

```

package com;

import org.hibernate.SessionFactory;
import org.hibernate.boot.Metadata;
import org.hibernate.boot.MetadataSources;
import org.hibernate.boot.registry.StandardServiceRegistry;
import org.hibernate.boot.registry.StandardServiceRegistryBuilder;

public class HibernateUtil {

 private static final SessionFactory sessionFactory;

```

    static {
        try {
            StandardServiceRegistry standardRegistry = new
StandardServiceRegistryBuilder().configure("hibernate.cfg.xml").build();
            Metadata metaData = new
MetadataSources(standardRegistry).getMetadataBuilder().build();
            sessionFactory =
metaData.getSessionFactoryBuilder().build();
        } catch (Throwable th) {
            throw new ExceptionInInitializerError(th);
        }
    }
}

```

```

    public static SessionFactory getSessionFactory() {
        return sessionFactory;
    }
}

```

```

package com;
public class OS {
    private long OSID;
    private String name;

    public OS() {

    }

    public OS(String name) {
        this.OSID = 0;
        this.name = name;
    }

    public long getOSID() {return this.OSID; }
    public String getName() { return this.name;}
    public void setOSID(long id) { this.OSID = id;}
    public void setName(String name) { this.name= name;}

}

```

package com;

import java.io.IOException;

import java.io.PrintWriter;

import java.util.List;

import java.util.Set;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import org.hibernate.Session;

import org.hibernate.SessionFactory;

import com.PDescription;

public class ProductDetailslazycollection extends HttpServlet {

private static final long serialVersionUID = 1L;

```

// public ProductDetailsLazyCollection() {
//     super();
//     // TODO Auto-generated constructor stub
// }

protected void doGet(HttpServletRequest request,
    HttpServletResponse response) throws ServletException, IOException {

    try {
        SessionFactory factory = HibernateUtil.getSessionFactory();

        Session session = factory.openSession();

        List<EProduct> list = session.createQuery("from EProduct").list();

        PrintWriter out = response.getWriter();
        out.println("<html><body>");

        out.println("<b>One to One Mapping</b><br>");
        for(EProduct p: list) {
            out.println("ID: " + String.valueOf(p.getID()) + ", Name: " +
                p.getName() +
                ", Price: " + String.valueOf(p.getPrice()) + ", Date
                Added: " + p.getDateAdded().toString());
            PDescription descrip = p.getPDescrip();
            out.println("<br>Description:" + descrip.getDescrip());
            out.println("<hr>");
        }
        out.println("<b>One to Many and Many to One Mapping</b><br>");
        for(EProduct p: list) {
            out.println("ID: " + String.valueOf(p.getID()) + ", Name: " +
                p.getName() +
                ", Price: " + String.valueOf(p.getPrice()) + ", Date
                Added: " + p.getDateAdded().toString());
            List<Color> colors = p.getColors();

```

```

        out.println("<br>Colors: <ul>");
        for(Color c: colors) {
            out.print("<li>" + c.getName() + "</li>");
        }
        out.println("</ul>");
        out.println("<hr>");

    }
    out.println("<b>Many to Many Mapping</b><br>");
    for(EProduct p: list) {
        out.println("ID: " + String.valueOf(p.getID()) + ", Name: " +
p.getName() +
        ", Price: " + String.valueOf(p.getPrice()) + ", Date
Added: " + p.getDateAdded().toString());
        Set<Finance> finances= p.getFinance();
        out.println("<br>Finance Options : <ul>");
        for(Finance f: finances) {
            out.print("<li>" + f.getFtype() + "</li>");
        }
        out.println("</ul>");
        out.println("<hr>");
    }

    session.close();

    out.println("</body></html>");

} catch (Exception ex) {
    throw ex;
}

}

}

```

```
// _____protected void doPost(HttpServletRequest request,  
HttpServletRequest response) throws ServletException, IOException {  
// _____}
```

```
package com;  
public class ScreenSizes {  
    private long SCREENID;  
    private String size;  
  
    public ScreenSizes() {  
  
    }  
    public ScreenSizes(String size) {  
        this.SCREENID = 0;  
        this.size = size;  
    }  
  
    public long getSCREENID() {return this.SCREENID; }  
    public String getSize() { return this.size;}  
    public void setSCREENID(long id) { this.SCREENID = id;}  
    public void setSize(String size) { this.size = size;}  
  
}
```